



Developing a Watershed Characterization & Analysis Approach for Meeting Multiple Mandates in Washington State

Multi Agency Watershed Task Force

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Introduction

1.1 Issue

Planners are faced with ever increasing number of mandates from state and federal agencies to protect, maintain and restore water quality, quantity, and aquatic/terrestrial ecosystems. Some of these mandates focus on a single issue (i.e. stormwater control) or species (i.e. salmon recovery) and require a separate planning/implementation process even though they share similar environmental characteristics and causes. This often results in duplicative efforts at the analysis/study level and at the planning/implementation level.

The different mandates have also resulted in the development of several different tools for characterizing and analyzing environmental characteristics and impacts. In developing a comprehensive planning document, a planner often has to review and interpret numerous studies, each of which may be addressing different problems, using different methods and conducted at different scales. Overall, this has created confusion for resource planners on how to best meet agency mandates and often created plans that are in conflict with one another.

1.2 Purpose of Multi-Agency Task Force

The purpose of the multi-agency landscape task force is to work with local governments, through application of a pilot project, to demonstrate how to develop a watershed based plan using integrated methods for characterizing and analyzing environmental characteristics. The pilot project would be designed to address multiple mandates, especially stormwater, salmon recovery, critical area protection and water quantity.

1.3 Importance of Planning at a Watershed Scale

Much of the recent research concludes that the protection, management and regulatory activities could be more successful if they incorporated an understanding of watershed processes. Traditionally, most planning has focused on the site scale without an understanding of watershed processes.

Watershed Processes – Refers to the dynamic physical and chemical interactions that form and maintain the landscape at the geographic scales of watersheds to basins (hundreds to thousands of square miles). These processes include the movement of water, sediment, nutrients, pathogens, toxins, energy, wood and wildlife as they enter into, pass through, and eventually leave the watershed.

Scientific studies have shown that watershed processes interact with landscape features, climate, and each other to produce the structure and functions of aquatic ecosystems that society is interested in protecting.

This multi-agency approach would allow federal and state resource agencies to speak with “one voice” on the best way to conduct watershed characterization and analysis.

This will, in turn would reduce the uncertainty local governments face in understanding how best to address the multiple resource guidance documents and policies recommended by state and federal governments. This should also provide a greater degree of certainty and predictability for local governments in regulating sensitive habitats at the permit level.

1.4 Tasks for Conducting Pilot Project

In order to develop a uniform approach to landscape analysis, the multi agency task force proposes to fund a pilot project at the local government level that would achieve the tasks set forth in Figure 1 (diagram of process) and 2 (scope of work).

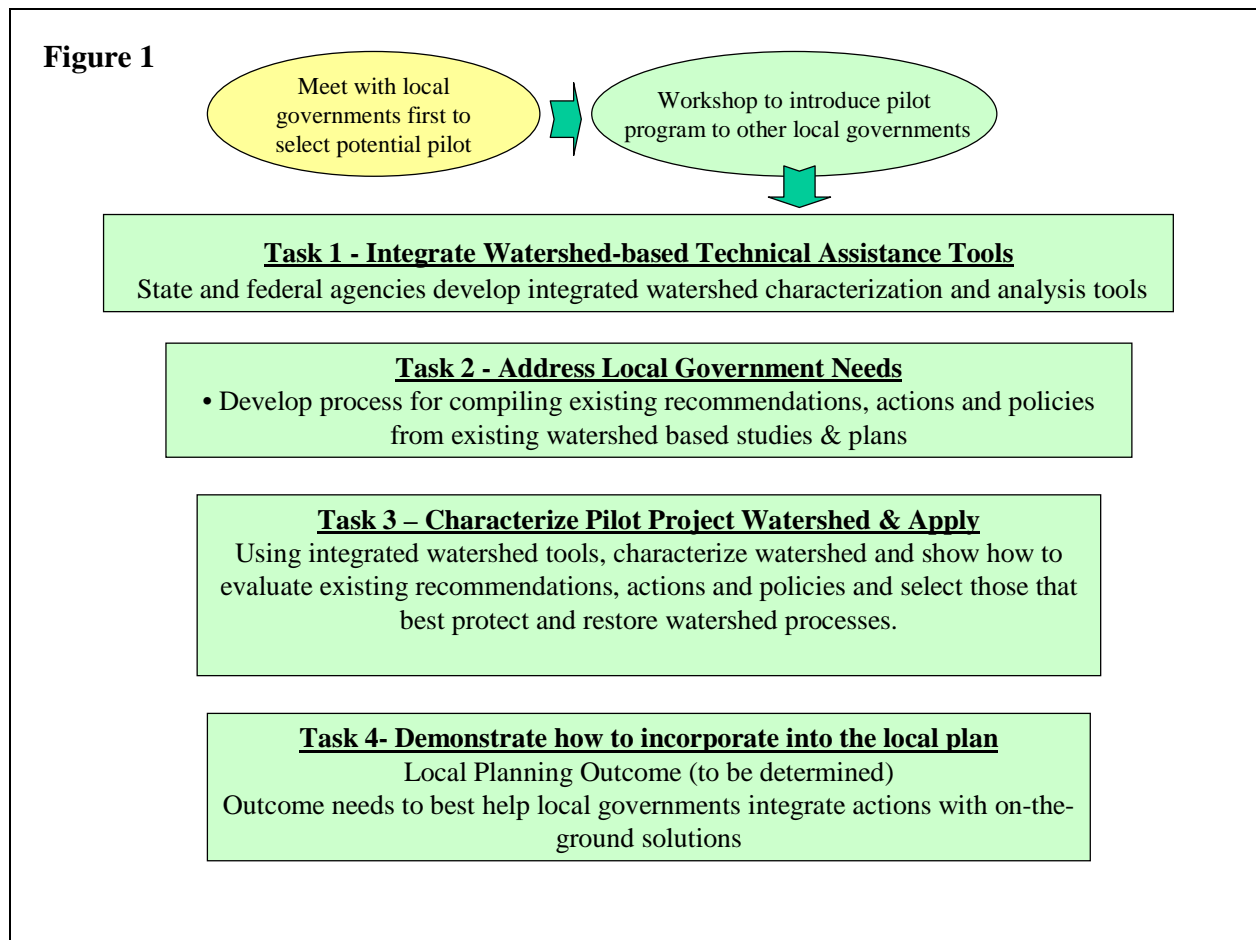


Figure 2 – Scope of Work

Purpose (what problems are we trying to solve?):

1. Help local jurisdictions integrate salmon recovery and watershed plan actions with land use planning and stormwater management requirements
2. Provide a multi-agency integrated approach to technical assistance. Currently there are difficulties in integrating state and local efforts.

Objectives:

Workshop: Hold a workshop to kick off the project.

Needs to:

Outline project for local governments that are interested in participating or observing this process

Describe the process we are intending

Task 1: Develop a methodology that integrates watershed-based technical assistance tools with these identified actions.

Needs to:

Identify the benefits of an integrated approach

Identify what should be monitored for success (e.g., costs/benefits to local governments)

Explore the benefits with local government from a new approach

Reduce local government workload and provide benefit to resources

Task 2: Generate report and a matrix of salmon recovery and watershed planning actions that have been identified.

Needs to:

Generate list of Plans

List of associated actions

Distinguish between mandated and not mandated actions

Task 3: Characterize Pilot Project Watershed using integrated tools

Demonstrate how to evaluate plans and actions in task 2 with tools and identify those most suitable for protecting or restoring watershed processes.

Task 4: Provide a product to local governments that identifies where (on the ground) the actions from plans will have the greatest benefit for resources. The specific product is yet to be determined.

Needs to:

Provide specific recommendations

Have associated GIS tools and maps

Formalize the recommendations in some sort of land use plan

1.5 Proposed Criteria for Selecting Pilot Project

The proposed criteria for evaluating the potential pilot project:

1. Data – does the county have adequate data to conduct a watershed analysis? This would include, at minimum, local data layers for aquatic resources (wetlands, lakes), soils, geology.
2. Existing Watershed Characterization/Analysis – does the county have an existing watershed characterization that could be applied to the pilot project? This would include characterizations that deal specifically with watershed processes.
3. Stormwater Standards – has the county adopted the most recent DOE stormwater manual and/or stormwater standards.
4. Stormwater Sources – sources are not adequately addressed by existing stormwater regulations. This would primarily involve rural agricultural areas that are outside of the area regulated by an existing regional NPDES permit.

5. Limited Impervious Cover – Less than 8 to 10% impervious surface at the 6th field HUC.
6. Cooperative Local and Tribal Government – is the staff open to and interest in working cooperatively with state government to develop a pilot program?
7. LID Allowed. Do the local government regulations allow for application and use of Low Impact Development standards?
8. Offsite Mitigation Allowed. Does the local government policies and regulations allow for watershed based mitigation such as mitigation banking?
9. Value of Resources. Does the County presently have habitat resources that are relatively intact and functioning? This criteria should also be applied to County's that have altered habitat resources but they have a high potential for restoration. This would include County's with large areas of agriculture (or forestry) such as Skagit and Whatcom County's. This also includes high quality salmon runs, endangered salmon runs, shellfish beds, estuarine or nearshore habitat.
10. Growth Pressure. Will the area be subject to significant growth pressures in the next 10 years?
11. Length of Time for Completion of Pilot Project. Can the pilot project be completed within a reasonable period of time? This would depend on how well defined the project is (is there existing planning already done?) and whether the County has to develop updates to existing planning documents before the pilot project can commence.
12. Application of Results. Will the Outcome of the Pilot Project be Useful Statewide? Pilot projects that will allow us to develop methods that can be used statewide, especially in areas that have important habitat resources and environmental issues. This includes areas that already have altered habitat that may be of low value but protection and restoration of physical processes may be critical to maintaining significant habitat such as marine habitat.
13. Identified Contact Person (Information Only, Not a Criterion). Is there a contact person who has already been working with state agencies on watershed issues?

A preliminary list of counties for potential pilot projects were proposed including: Lower Dungeness River, Spokane, Yakima County, Kitsap County, Skamania County, Whatcom County (Drayton Harbor), Island County, Jefferson County (Tri-Area), Thurston County (Henderson Inlet), Mason, Skagit County (Samish Bay, Skagit County (Lower Skagit River). Please add any other Counties or areas that you feel may qualify for a pilot project.

1.6 Potential Pilot Project Sites and Existing Conditions

Lower Dungeness River

- Watershed plan under WRIA planning (WRIA 18) is approved. DOE is now in rulemaking process.
- Salmon recovery plan for 3 listed species.
- TMDL – Water cleanup plan for fecal coliform in Matriotti Creek (lower basin tributary).
- Shellfish closure in Dungeness Bay
- Dungeness Bay is a USFWS National Wildlife Refuge.
- Elevated nitrates in groundwater in parts of the watershed.
- Declining groundwater table in parts of the watershed.
- Strong growth pressures – Clallam Co projected to increase 21% by 2025, with the lower Dungeness being the fastest growing area of the county. This includes residential as well as big-box commercial. City of Sequim is projecting a population increase from 5,000 to upwards of 30,000 by 2025 and is looking to expand its borders.
- Clallam County has unincorporated Urban Growth Area at Carlsborg in need of stormwater management planning.
- Rapid transition from agriculture/dairy to residential development. Some innovative agricultural models (organics, wine, lavender).
- Dungeness River Management Team has long collaborative history.
- Local citizen group that advocates for improved stormwater management exists
- Local League of Women Voters is supportive of improved stormwater management and the proposed county ordinance.
- Clallam County is in LID ordinance development project for local governments.
- No NPDES permits; county and City of Sequim use outdated 1992 DOE Manual
- Clallam County has a stormwater ordinance in draft form that includes some reference to the new DOE Manual.
- Home Builders Association has formed a committee to develop a voluntary Green Built Checklist that will incorporate Low Impact Development incentives. HBA wants to see: a) local empirical evidence that what they are currently doing is not working to properly manage stormwater, and b) stormwater management that is simple and relatively inexpensive, particularly for single-family residences.
- Watershed was part of “shellfish-urbanization project” conducted by UW and PSAT. In addition, a separate study of impervious surfaces is nearing completion.
- Local governments and tribe may be interested provided there are clear incentives and funding to support their participation. The Jamestown S’Klallam Tribe is an advocate for improved stormwater management.

Jefferson County – Tri-Area (Hadlock and Chimacum area)

- Comprises an Urban Growth Area in unincorporated county.
- Chimacum Creek is center of collaborative chum salmon restoration, but is not an ESA critical habitat stream. Nearshore areas are critical habitat.

- Shellfish area threatened at the mouth of the creek at Port Hadlock.
- Rapid growth – projected for county as 55% by 2025.
- Aquifer recharge area with significant water supply wells covers part of the area.
- Agricultural (mostly dairy) land uses just upstream of urbanizing area.
- No NPDES permit issues.
- Watershed plan approved (WRIA 17) but under revision due to community concerns with instream flows.
- County has adopted updated (2004) Ecology stormwater manual and in last few years begun to develop stormwater comprehensive planning and an extensive outreach and education campaign through a contract with WSU Extension
- County is in LID ordinance development project for local governments.
- Federal – the Navy has an ordnance depot on Indian Island and is a partner in marine resource issues, though they are often absent at marine resource meetings.
- Nearby Port Townsend, while outside the Tri-area, is in the process of reviewing the Ecology Manual for adoption.

Thurston County – Henderson Inlet

- TMDL and Water Cleanup plan
- Shellfish closure with community shellfish farm.
- South Sound is identified as fragile and susceptible to nutrient loading.
- Rapid growth pressures – projected growth 62% for the county by 2025.
- 2002 impervious area for watershed calculated at about 14%. Heavily urbanized in Lacey area.
- County recently adopted Henderson Inlet Watershed Protection Area to manage onsite sewage systems management through a risk-based system. Fees for the program are based on system type and risk and funding also comes from CD.
- Salmon recovery plan for the area focuses on nearshore areas for ESA listed Chinook from nearby Nisqually River, as well as fish from other parts of Sound.
- Thurston County is participating in LID ordinance development project.
- County and cities have a well-developed stormwater utility system.
- Stream teams and stormwater education for the community has been underway for some time so the community has some awareness.
- WRIA watershed plan for Deschutes WRIA 13 was completed but not approved because of lack of consensus with the Squaxin Island Tribe.

Island County

- NPDES permits – Oak Harbor and Island Co for the unincorporated UGA around Oak Harbor. Others: Coupeville Wastewater Treatment Plant, Penn Cove Sewer District. Nichols Brothers has a waste discharge permit.
- 303(d) list includes estuaries in Port Susan and Skagit Bay,
- Shellfish areas threatened in Penn Cove and likely soon to be in Holmes Harbor. According to Washington State Department of Health, out of 56 public beaches, 19 have a marine biotoxin or pollution closure and 32 have a harvest advisory.
- Whidbey Basin identified as fragile and susceptible to nutrient loading.

- Salmon recovery plan focuses on nearshore. Whidbey Basin is a key basin for juvenile salmon from all over Puget Sound. West Whidbey shoreline is at mouth of straits leading to Pacific Ocean and most PS salmon pass by in migratory life cycle. The Snohomish, Stillaguamish, and Skagit rivers all empty into or near this basin.
- All of Island County is designated as a sole source aquifer by EPA. South Whidbey and Camano Island have aquifers with recharge and seawater intrusion issues. (The County is served by a multiple aquifer system. The sole source designation refers to the County's reliance on groundwater for drinking water rather than a singular aquifer.) 72% of Island County residents rely on wells for drinking water. There is nitrate level data showing an upward trend.
- WRIA planning limited to groundwater. WRIA 6 plan completed and approved.
- Two nonpoint pollution plans are adopted and a third in progress for Camano Island with active citizen involvement.
- Local environmental volunteerism and community education is high through Beachwatchers program and several nonprofit groups.
- Federal – the Navy has a big presence on north Whidbey Island through a Naval Air Station.

Skagit County – Samish Bay

- Threatened shellfish area
- No NPDES permits
- Agricultural land use under pressure from development – growth projected for county as 60% by 2025.
- No Urban Growth Areas in the watershed.
- Samish River not a Chinook stream but has other salmon. Salmon recovery plan developed by WDFW and Skagit River Systems Cooperative (representing local tribes) does not have buy-in from county or local groups.
- WRIA 3 watershed plan completed in December 2004 but never finalized or voted on due to lack of consensus on instream flows.
- Samish Basin is a major focus of local conservation efforts and is a geographic priority for conservation and restoration by Skagit Conservation District. Citizens task force (Skagit Conservation Education Alliance) very active in basin and chaired by Bill Dewey at Taylor Shellfish.

Skagit County – lower Skagit River

- Salmon recovery plan – very high value habitat and river production for Chinook and other salmon.
- NPDES – Mt Vernon, Sedro Woolley, and Burlington urban areas and county unincorporated Urban Growth Area around them.
- County has expressed need for help in dealing with NPDES and other stormwater management issues. Is particularly interested in having a multi-stakeholder workshop to address various interests.
- TMDL - Lower Skagit River TMDL for fecal coliform is in development. Temperature TMDLs for lower Skagit tributaries. Eight water cleanup plans

approved in 1997 for numerous Skagit River tributaries, mostly covering fecal and total phosphorous.

- WRIA 4 planning process ended without plan due to lack of consensus on instream flows.
- Salmon recovery plan developed by WDFW and Skagit River Systems Cooperative but does not have buy-in from county or local groups.
- Conflict over land use (especially buffers) between environmental community and tribes versus agricultural community and county land use decision-makers. Land use regulations under appeal and the state has weighed in .
- County has a monitoring program to address adaptive management of buffers.

Whatcom County – Drayton Harbor watershed

- California Creek has salmon –not the ESA listed ones, but one of few lowland streams in county with remaining native salmon population.
- Shellfish closure –community shellfish farm. Some shellfish beds have been reopened.
- Existing landscape analysis modeling already done by Ecology.
- WRIA 1 watershed plan approved.
- Salmon recovery plan for Nooksack River completed.
- History of violation of tribal cultural sites at Semiahmoo Spit requires sensitivity.
- Development pressure is great – 2025 projection for county is 48%.
- Nearby industrial area and port development at Cherry Point have growth pressures and marine impacts.
- Agriculture in the watershed, especially dairy. Also a lot of golf courses in the area with new development.
- NPDES – Does not apply. For the county NPDES will covers unincorporated UGA around Bellingham and parts of Lake Whatcom.
- Unclear whether county has time given ongoing SMP update. However, they should finish SMP update in spring 2006, and thus may be ready to take on a project like this.